REGULATION 145/00 TO AMEND
REGULATION 213 (CONSTUCTION PROJECTS)
MADE UNDER *THE OCCUPATIONAL HEALTH AND SAFETY ACT*

Current Regulation	New Regulation
1. (1) In this Regulation, "adequate", in relation to a procedure, material, device, object or thing, means sufficient for its intended use and sufficient to protect a worker from damage to the worker's body or health, and "adequately" has a corresponding meaning;	**1.** (1) In this Regulation, "adequate", in relation to a procedure, material, device, object or thing, means, (a) sufficient for both its intended and its actual use, and (b) sufficient to protect a worker from occupational illness or occupational injury, and "adequately" has a corresponding meaning; "approved", in relation to a form, means approved by the Minister; "blocker truck" means a truck that weighs at least 6,800 kilograms and has four-way flashers and a mounted flashing arrowboard sign; *"Building Code"* means Ontario Regulation *403/97,* made under the *Budding Code Act, 1992;* "crash truck" means a blocker truck that is equipped with a crash-attenuating device;
1. "fall arrest system" means an assembly of components intended to arrest the fall of a worker;	**1.** "fall arrest system" means an assembly of components joined together so that when the assembly is connected to a fixed support, it is capable of arresting a worker's fall; "fall restricting system" means a type of fall arrest system that has been designed to limit a worker's fall to a specified distance; "fixed support" means a permanent or temporary structure or a component of such a structure that can withstand all loads and forces the structure or component is intended to support or resist and is sufficient to protect a worker's health and safety, and includes equipment or devices that are securely fastened to the structure or component;

	"freeway" means a controlled-access highway that has a continuous dividing median and a normal posted speed limit of 90 kilometres per hour or more;
1. "guardrail" means a guardrail that complies with standards set out in section 85;	**1.** "guardrail system" means an assembly of components joined together to provide a barrier to prevent a worker from falling from the edge of a surface; "highway" means a common and public highway, street, avenue, parkway, driveway, square, place, bridge, viaduct or trestle, any part of which is intended for or used by the general public for the passage of vehicles; "longitudinal buffer area" means the area of a project between the end of a lane closure taper and the start of a work area;
1. "public way" means a sidewalk, street, highway, square or other open space to which the public has access, as of right or by invitation, expressed or implied;	**1.** "public way" means a highway or other street, avenue, parkway, driveway, square, place, bridge, viaduct, or other open space to which the public has access, as of right or by expressed or implied invitation; "roadway" means the travelled portion of a highway;
1. "safety net" means a net that is located and supported in such a way that it arrests the fall of a worker who may fall into it without endangering the worker;	**1.** "safety net" means a safety net that complies with section 26.8, and is located and supported in such a way that it arrests the fall of a worker who may fall into it without endangering the worker;
1. "sheathing" means the vertical members of shoring that are placed up against the walls of an excavation to directly resist the pressure exerted from the walls of the excavation;	**1.** "sheathing" means the members of shoring that are placed up against the walls of an excavation to directly resist the pressure exerted from the walls of the excavation; "sign truck" means a vehicle that has, (a) four-way flashers and a mounted flashing arrowboard sign, or (b) a portable trailer with a mounted flashing arrowboard sign; tower crane" means a travelling, fixed or climbing mechanical device or structure that has,

<table>
<tr><td></td><td>(a) a boom, a jib or both;
(b) a power-driven drum and wire rope to raise, lower or move material; and
(c) a vertical mast.

"travel restraint system" means an assembly of components capable of restricting a worker's movement on a work surface and preventing the worker from reaching a location from which he or she could fall;</td></tr>
<tr><td>1.

(2) In this Regulation, a short form listed in Column 1 of the Table to this subsection has the same meaning as the term set out opposite to it in Column 2.

Table

Column 1 — Column 2
Short Forms — Correspondence Terms
CSA — Canadian Standards Association
CAN — National Standards of Canada
DIN — Deutsche Industrie Norm
Ga — Gauge</td><td>1.

(2) No change

Table

Column 1 — Column 2
Short Forms — Correspondence Terms
ANSI — American National Standards Institute
CSA — Canadian Standards Association
CAN — National Standards of Canada
DIN — Deutsche Industrie Norm
Ga — Gauge</td></tr>
<tr><td>4.

The Director of the Construction Health and Safety Branch may designate in writing a part of a project as a project and the designated project is considered to be a project for the purposes of the Act and this Regulation.</td><td>4.

A Director may designate in writing a part of a project as a project and the designated project is considered to be a project for the purposes of the Act and this Regulation.</td></tr>
<tr><td>5.

(1) Every constructor shall register with the Director of the Construction Health and Safety Branch before or within thirty days after undertaking a project.

(2) Every employer engaged in construction shall register with the Director of the Construction Health and Safety Branch before or within thirty days after first employing a worker in construction.</td><td>5.

(1) Before beginning work at a project, each constructor and employer engaged in construction shall complete an approved registration form.

(2) The constructor shall ensure that,
(a) each employer at the project provides to the constructor a completed approved registration form; and</td></tr>
</table>

	(b) a copy of the employer's completed form is kept at the project while the employer is working there.
(3) A registration under this section shall be made by filing a statement that sets out,	REVOKED
(a) in the case of a constructor or employer who is an individual or a sole proprietor, (i) the full name, regular business address and business telephone number of the individual or sole proprietor, and (ii) the residence address of the individual or sole proprietor;	
(b) in the case of a constructor or employer that is a partnership or syndicate, (i) its name or style, (ii) its business address and telephone number, (iii) if the partnership or syndicate is composed of any individuals, the particulars required by clause (a) for those individuals, and (iv) If the partnership or syndicate is composed of any corporations, the particulars required by clause (c) for those corporations;	
(c) in the case of a constructor or employer that is a corporation, (i) its name, (i) its date of incorporation, (ii) the province or jurisdiction in which it was incorporated, (iii) its main business address and telephone number, (iv) the full name and residence address of each director of the corporation and the date when he or she became a director, and (v) the full name and residence address of each of the principal officers of the corporation and the date when he or she became a principal officer;	
(d) a description of the type of construction in which the constructor or employer is regularly engaged;	

(e) the average number of employees, if any, employed by the constructor or employer to construct projects or parts of projects; (f) The firm number, if any, assigned to the constructor or employer by the Workplace Safety and Insurance Board; (g) the rate number, if any, assigned to the constructor or employer by the Workplace Safety and Insurance Board; and (h) in the case of an employer, a statement as to whether, at the time of registration, the employer has ever had the employer's assessment increased by the Workplace Safety and Insurance Board under section 82 of the *Workplace Safety and Insurance Act, 1997*. (4) The statement must be verified by the certificate of, (a) the constructor or employer if the constructor or employer is an individual or a sole proprietorship; (b) a partner of the constructor or employer if the constructor or employer is a partnership or syndicate; or (c) the president or a director of the constructor or employer if the constructor or employer is a corporation. (5) Every constructor or employer shall notify the Director of the Construction Health and Safety Branch of every change in the particulars filed under subsection (3). (6) A notice under subsection (5) shall be in writing, given within thirty days after the change has occurred and shall give particulars of the change and the date it occurred.	REVOKED REVOKED REVOKED
6. 1) This section applies with respect to a project if, (a) the total cost of labour and materials for the project is expected to exceed $50,000; (b) the work is the erection or structural alteration of a building more	**6.** NO CHANGE

than two stories or more than 7.5 metres high; (c) the work is the demolition of a building at least four metres high with a floor area of at least thirty square metres; (d) the work is the erection, structural alteration or structural repair of a bridge, an earth-retaining structure or a water-retaining structure more than three metres high or of a silo, chimney or a similar structure more than 7.5 metres high; (e) work in compressed air is to be done at the project; (f) a tunnel, caisson, cofferdam or well into which a person may enter is to be constructed at the project; (g) a trench into which a person may enter is to be excavated at the project and the trench is more than 300 metres long or more than 1.2 metres deep and over thirty metres long; or (h) a part of the permanent or temporary work is required by this Regulation to be designed by a professional engineer.	
(2) A constructor shall file a notice with a Director before beginning work on a project.	2) The constructor shall comply with subsection (3) or (4) before beginning work at the project. (3) The constructor shall complete an approved notification form and file it at the Ministry office located nearest to the project.
(3) If the work at a project is not expected to take more than fourteen days, a constructor shall, before the work begins, provide by telephone to an inspector at the nearest office of the Construction Health and Safety Branch the information required under Subsection (5) for the project.	(4)If the constructor believes that the work at the project will not take more than 14 days, the constructor may provide the relevant information to an inspector at the Ministry office located nearest to the project, (a) by faxing the completed form to the inspector, or (b) by providing the information that would be required to complete the form to the inspector by telephone.
(4) A constructor may begin work on a project before filing a notice, (a) if the work must be done immediately to prevent injury to people or damage to property; and (b) if the constructor provides by telephone to an inspector in the nearest office of the Construction Health and Safety Branch as	(5) Despite subsection (2), the constructor may begin work at a project before complying with subsection (3) or (4) if the following conditions are met: 1. It is necessary to do the work immediately to prevent injury to people or damage to property.

soon as is practicable after work begins the information required under subsection (5) for the project.	2. Before beginning the work, the constructor gives an inspector notice of the information required in the form by telephone or fax.
(5) A notice required by subsection (2) shall be signed by a representative or agent of the constructor and shall,	REVOKED
(a) describe the project;	
(b) state the name, mailing address, address for service and telephone number of the constructor and of the owner of the project;	
(c) state the name of the supervisor in charge of the project and the supervisor's mailing address, address for service and telephone number;	
(d) state the municipal address of the project or include a description of its location, including its location with respect to the nearest public highway, that is sufficient to enable the Director to locate it;	
(e) state the starting date and the anticipated duration of the work;	
(f) state the total cost for labour and materials for the project;	
(g) list all designed substances that may be used handled or disturbed by work on the project; and	
(h) state whether a shaft tunnel, caisson or cofferdam is to be constructed as part of the project.	REVOKED
(6) If a shaft, tunnel, caisson or cofferdam is to be constructed at a project, a notice shall set out in addition to the information described in subsection (5),	
(a) the specifications for the proposed shaft, tunnel, caisson or cofferdam together with drawings showing profiles, transverse sections and plans for it; and	
(b) the complete details of all temporary and permanent ground support for the shaft, tunnel, caisson or cofferdam.	(6) The constructor shall keep the completed notification form posted in a conspicuous place at the project or available at the project for review by an inspector.
(7) Before work at a project begins, a constructor shall post or have available for review at the project a copy of the notice.	

7. Before work is begun on a trench more than 1.2 metres deep into which a worker may enter, the constructor shall notify by telephone an inspector in the office of the Construction Health and Safety Branch nearest to the project.	**7.** If Section 6 does not apply to a project but the project includes work on a trench more than 1.2 meters deep into which a worker may enter, the constructor shall, before any work at the project is begun, give notice in person, by telephone or by fax to the Ministry office located nearest to the project.
8. A written report under subsection 51 (1) of the Act respecting an occurrence in which a person is killed or critically injured shall set out, (a) the name and address of the constructor and the employer, if the person involved is a worker; (b) the nature and the circumstances of the occurrence and the bodily injury sustained by the person; (c) a description of the machinery or equipment involved; (d) the time and place of the occurrence; (e) the name and address of the person involved; (f) the names and addresses of all witnesses to the occurrence; (g) the name and address of the physician or surgeon, if any, by whom the person was or is being attended for the injury; and (h) the steps taken to prevent a recurrence. O. Reg. 213/91, s. 8.	**8.** NO CHANGE (g) the name and address of any legally qualified medical practitioner, by whom the person was or is being attended for the injury; and
9. (1) A notice under subsection 52(1) of the Act respecting an occurrence involving a worker shall set out, (a) the name, address and type of business of the employer; (b) the nature and the circumstances of the occurrence and the bodily injury or illness sustained by the worker; (c) a description of the machinery or equipment involved;	**9.** NO CHANGE

(d) the time and place of the occurrence; (e) the name and address of the worker involved; (f) the names and addresses of all witnesses to the occurrence; (g) the name and address of that physician or surgeon, if any, by whom the worker was or is being attended for injury or illness; and (h) the steps taken to prevent a recurrence. (2) A notice under subsection 52 (2) of the Act respecting a worker occupational illness shall set out, (a) the name, address and type of business of the employer; (b) the nature of the occupational illness; (c) the name and address of the worker involved; (d) the name and address of the physician or surgeon, if any, by whom the worker was or is being attended for the illness; and (e) the steps taken to prevent a recurrence .	(g) the name and address of any legally qualified medical practitioner by whom the worker was or is being attended for the injury or illness: (g. 1) the name and address of each medical facility, if any, where the worker was or is being attended for the injury or illness: and NO CHANGE (2) A notice under section 52(2) of the Act (information and particulars respecting a worker's occupational illness) shall contain the following information: 1. The employer's name, address and type of business 2. The nature of the illness 3. The worker's name and address 4. The name and address of any legally qualified medical practitioner by whom the worker was or is being attended for the illness. 5. The name and address of each medical facility, if any, where the worker was or is being attended for the illness 6. A description of the steps taken to prevent a recurrence.
12. (1) This section applies with respect to an occurrence for which a report under section 51(1) of the Act or a notice under section 52 or 53 of the Act is given, if the occurrence involved a failure of all or part of, (a) temporary or permanent works; (b) a structure;	**12.** NO CHANGE

(c) an excavation wall or similar earthwork for which a professional engineer has given a written opinion that the stability of the wall is such that no worker will be endangered by it:; or (d) a crane or similar hoisting device. (2) An employer or constructor, as the case may be, who gives a report under subsection 51(1) of the Act or a notice under section 52 or 53 of the Act shall, within fourteen days after the occurrence, give the Director of the Construction Health and Safety Branch a written opinion from a professional engineer stating the cause of the occurrence.	(2) A constructor or employer who submits a report under subsection 51(1) of the Act(notice of death or injury) or gives a notice under section 52 or 53 of the Act(notice of accidents, etc.) shall also provide, within 14 days after the occurrence, a professional engineer's written opinion stating the cause of the occurrence.
13. (1) A constructor shall post in a conspicuous place at a project and keep posted while work is done at the project a notice setting out. (a) the constructor's name and if the constructor carries on business in a different name, the business name: (b) the address and telephone number of the constructor's head office or principal place of business in Ontario: and (c) the address and telephone number of the head office and the nearest office of the Construction Health and Safety Branch. (2) Within forty-eight hours after a health and safety representative or joint health and safety committee members are selected for a project, a constructor shall add to the notice the name, trade and employer of the health and safety representative or of each of the committee members,	**13.** NO CHANGE (c) the address and telephone number of the nearest office of the Ministry. NO CHANGE
15. (1) An employer of five or more workers on a project shall appoint a supervisor for the workers.	**15.** (1) NO CHANGE (2) The supervisor shall supervise the work at all times either personally or by having an assistant, who is a competent person, do so personally.

16. (1) Subject to subsection(2),no person shall employ a person younger that sixteen years of age at a project. (2) A person who is fifteen years of age and who, under the Education Act, is excused from attending school or is required to attend school part time may be employed as a worker at a project	**16**. At a project, no person younger that 16 years of age shall, (a) be employed in or about the workplace; or (b) be permitted to be present in or about the workplace while work is being performed.
17. No constructor shall begin work at a project until arrangements have been made to provide a means of transporting workers to medical facilities.	**17.** (1) A constructor shall establish for a project written procedures to be followed in the event of an emergency and shall ensure that the procedures are followed at the project. (2)The constructor shall review the emergency procedures with the joint health and safety committee or the health and safety representative for the project, if any. (3)The constructor shall ensure that the emergency procedures are posted in a conspicuous place at the project.
18. A telephone or a two-way radio shall be installed or be readily accessible at a project described in subsection 6(1).	**18.** The constructor shall ensure that every worker at the project has ready access to a telephone, two-way radio or other system of two-way communication in the event of an emergency.
26. (1) Unless a safety net or travel restraint system is being used, a worker shall wear a fall arrest system if the worker may fall, (a) a distance of more that three metres:	**26.** Section 26.1 to 26.10 apply where a worker is exposed to any of the following hazards: 1. Falling more than 3 metres. 2. Falling more than 1.2 metres, if the work area is used as a path for a wheelbarrow or similar equipment.

(b) into operating machinery: (c) into water or another liquid: or (d) into or onto a hazardous substance or object. (2) In subsection(1) “travel restraint system”” means a mechanism which restricts the movement of a worker on a work surface. (3) A fall arrest system, (a) shall be adequately secured to a fixed support or to a lifeline that is securely fastened to the project; (b) shall be so arranged that if the wearer falls, the wearer will be suspended not more that 1.5 metres below his or her location before the fall: and (c) shall apply a peak fall arrest force not greater that eight kilonewtons to the wearer (4) A fixed support shall be capable of resisting the arrest forces in case of a fall and be free of sharp edges that might cut or chafe the connection between the fall arrest system and the fixed support. (5) A lanyard used in a fall arrest system shall have a nominal diameter of at least sixteen millimetres and be made of nylon rope or other durable material of equivalent impact strength and elasticity. (6) A lifeline in a fall arrest system, (a) shall have a nominal diameter of at least sixteen millimetres and be made of polypropylene or other durable material that provides at least equal protection to the user; (b) shall extend to the ground or be provided with a positive stop that prevents the connection from the fall arrest system to the lifeline from running off the end of the lifeline; (c) shall be connected to an object that is capable of resisting the arrest forces in case of a fall;	3. Falling into operating machinery. 4. Falling into water or another liquid. 5. Falling into or onto a hazardous substance or object 6. Falling through an opening on a work surface. 26.1 (1) A worker shall be adequately protected by a guardrail system that meets the requirements of subsections 26.3 (2) to (8). (2) Despite subsection (1), if it is not reasonably possible to install a guardrail system as that subsection requires, a worker shall be adequately protected by at least one of the following methods of fall protection. 1. A travel restraint system that meets the requirements of section 26.4. 2. A fall restricting system that meets the requirements of section 26.5. 3. A fall arrest system that meets the requirements of section 26.6. 4. A safety net that meets the requirements of section 26.8. (3) The components of any system listed in subsection (2) shall be designed by a professional engineer in accordance with good engineering practice, and shall meet the requirements of any of the following National Standards of Canada standards that are applicable: 1. *CANICSA-Z259.1-M99:* Safety Belts and Lanyards 2. CAN/CSA-Z259.2.l-M98: Fall Arresting Devices and Vertical Lifelines 3. CAN/CSA-Z259.2.2-M98: Self-Retracting Devices for Personal Fall Arrest Systems 4. CAN/CSA-Z259.2.3-M98: Descent Control Devices 5. CAN/CSA-Z259.10-M90: Full Body Harnesses 6. CAN/CSA-Z259. I l-M92: Shock Absorbers for Personal Fall Arrest Systems (4) Before any use of a fall arrest system or a safety net by a worker at a project, the worker's employer shall develop written procedures for rescuing the worker after his or her fall has been arrested.

(d) shall be free of knots, splices and imperfections; (e) shall be used in such a way that it is not likely to be cut or chafed; and (f) shall be used by only one person at a time. **NOTE:** *Adherence to Canadian Standards Association Standard Z259.1-1976 Fall-Arresting Safety Belts and Lanyards for the Construction and Mining Industries and Canadian Standards Association Standard Z259.2-M1979, Fall-Arresting Devices, Personnel Lowering Devices and Life Lines, complies with the intent of this section.*	26.2 (1) An employer shall ensure that a worker who may use a fall protection system is adequately trained in its use and given adequate oral and written instructions by a competent person. (2) The employer shall ensure that the person who provides the training and instruction referred to in subsection (1) prepares a written training and instruction record for each worker and signs the record. (3) The training and instruction record shall include the worker's name and the dates on which training and instruction took place. (4) The employer shall make the training and instruction record for each worker available to an inspector on request. 26.3 (1) Despite paragraph 1 of section 26, a guardrail system that meets the requirements of this section shall be used if a worker has access to the perimeter or an open side of any of the following work surfaces and is exposed to a fall of 2.4 metres or more: 1. A floor, including the floor of a mezzanine or balcony. 2. The surface of a bridge. 3. A roof while formwork is in place. 4. A scaffold platform or other work platform, runway or ramp. (2) One of the following precautions shall be used to prevent a worker from falling through an opening on a work surface: 1. A guardrail system that meets the requirements of this section. 2. A protective covering that, *i.* completely covers the opening, *ii.* is securely fastened, iii. is adequately identified as covering an opening, iv. is made from material adequate to support all loads to which the covering may be subjected, and v. is capable of supporting a live load of at least 2.4 kilonewtons per square metre without exceeding the allowable unit stresses for the material used.

(3) The guardrail system or protective covering required under subsection (1) or (2) may be removed temporarily to perform work in or around the opening if a worker is adequately protected and signs are posted in accordance with subsections 44 (1) and (2).

(4) The following are the specifications for a guardrail system:

1. It shall have a top rail, an intermediate rail and a toe board.

2. The intermediate rail may be replaced by material that can withstand a point load of 450 newtons applied in a lateral or vertical downward direction.

3. The top of the guardrail system shall be located at least 0.9 metres but not more than 1.1 metres above the surface on which the system is installed.

4. The toe board shall extend from the surface to which the guardrail system is attached to a height of at least 100 millimetres or, if the toe board is made of wood, at least 89 millimetres.

5. If the guardrail system is located at the perimeter of a work surface, the distance between the edge of the surface and the guardrail system shall not be greater than 300 millimetres.

(5) A guardrail system shall be capable of resisting anywhere along the length of the system the following loads when applied separately, without exceeding the allowable unit stress for each material used:

1. A point load of 675 newtons applied in a lateral direction to the top rail.

2. A point load of 450 newtons applied in a vertical downward direction to the' top rail.

3. A point load of 450 newtons applied in a lateral or vertical downward direction to the intermediate rail, or midway between the top rail and the toe board.

4. A point load of 225 newtons applied in a lateral direction to the toe board.

(6) If the distance between any two adjacent posts of the guardrail system is greater than 2.4 metres, the system shall be capable of resisting the loads specified in subsection (5) increased in proportion to the greater distance between the posts.

(7) The following additional requirements apply to a guardrail system that is made of wood:

1. The wood shall be spruce, pine or fir (S-P-F) timber of construction grade quality or better.

2. The wood shall be free of sharp objects such as splinters and protruding nails.

3. The system shall have posts that are at least 38 millimetres by 89 millimetres, are securely fastened to the surface and are spaced at intervals of not more than 2.4 metres.

4. The top rail and the intermediate rail shall each be at least 38 millimetres by 89 millimetres.

(8) The following additional requirements apply to a guardrail system that is made of wire rope:

1. The top rail and intermediate rail shall be made of wire rope that is at least 10 millimetres in diameter, and the rope shall be kept taut by a turnbuckle.

2. The outward deflection of the top rail and intermediate rail resulting from the loads specified in subsection (5) shall not extend beyond the edge of a work surface.

3. The system shall have vertical separators at intervals of not more than 2.4 metres and horizontal supports at intervals of not more than 9 metres.

4. The intermediate rail shall be located midway between the top rail and the toe board.

26.4 (1) A travel restraint system shall consist of a full body harness with adequate attachment points or a safety belt.

(2) The frill body harness or safety belt shall be attached by a lifeline or lanyard to a fixed support that meets the requirements of section 26.7.

(3) The travel restraint system shall be inspected by a competent worker before each use.

(4) If a component of the travel restraint system is found to be defective on inspection, the defective component shall immediately he taken out of service.

26.5 (1) A fall restricting system shall consist of an assembly of components that is,

(a) attached to an independent fixed support that meets the requirements of section 26.7; and

(b) designed and arranged in accordance with the manufacturer's instructions so that a worker's free fall distance does not exceed 0.6 metres.

(2) The fall restricting system shall be inspected by a competent worker before each use.

(3) If a worker who is using the fall restricting system falls more than 0.6 metres, the system shall be immediately removed from service and shall not be used again by a worker unless all components of the system have been certified by the manufacturer as being safe for re-use.

26.6 (1) A fall arrest system shall consist of a full body harness with adequate attachment points and a lanyard equipped with a shock absorber or similar device.

(2) The fall arrest system shall be attached by a lifeline or by the lanyard to an independent fixed support that meets the requirements of section 26.7.

(3) The fall arrest system shall be arranged so that a worker cannot hit the ground or an object or level below the work.

(4) Despite subsection (1), the fall arrest system shall not include a shock absorber if wearing or using one could cause a worker to hit the ground or an object or level below the work.

(5) The fall arrest system shall not subject a worker who falls to a peak fall arrest force greater than 8 kilonewtons.

(6) The fall arrest system shall be inspected by a competent worker before each use.

(7) If a component of the fall arrest system is found to be defective on inspection, the defective component shall immediately be taken out of service.

(8) If a worker who is using the fall arrest system falls, the system shall be immediately removed from service and shall not be used again by a worker unless all components of the system have been certified by the manufacturer as being safe for re-use

26.7 (1) A permanent anchor system shall be used as the fixed support in a fall arrest system, fall restricting system or travel restraint system if the following conditions are

	met: 1. The anchor system has been installed according to the *Building Code*. 2. It is safe and practical to use the anchor system as the fixed support. (2) If the conditions set out in subsection (I) are not met, a temporary fixed support shall be used that meets the following requirements: 1. Subject to paragraph 2, a support used in a fall arrest system shall be capable of supporting a static force of at least 8 kilonewtons without exceeding the allowable unit stress for each material used. 2. If a shock absorber is also used in the fall arrest sytem, the support shall be capable of supporting a static force of at least 6 kilonewtons without exceeding the allowable unit stress for each material used. 3. Subject to paragraph 4, a support used in a fall restricting system must be capable of supporting a static force of at least 6 kilonewtons without exceeding the allowable unit stress for each material used. 4. Paragraph 3 does not apply to a support that is used in accordance with the manufacturer's written instructions and is adequate to protect a worker. 5. A support used in a travel restraint system shall be capable of supporting a static force of at least 2 kilonewtons without exceeding the allowable unit stress for each material used. (3) Despite the requirements listed in subsection (2), the support capacity of a temporary fixed support used in a fall protection system may be determined by dynamic testing in accordance with good engineering practice to ensure that the temporary fixed support has adequate capacity to arrest a worker's fall. (3) A fixed support shall not have any sharp edges that could cut, chafe or abrade the connection between it and another component of the system. 26.8 (1) A safety net shall be designed, tested and installed in accordance with ANSI Standard 10.11-1989, Personnel and Debris Nets for Construction and Demolition Operations. (2) The safety net shall be installed by a competent worker. (3) A professional engineer or a competent person under the engineer's supervision shall inspect and test the installation of the safety net before it is put in service.

(4) The engineer shall document the inspection and testing of the safety net and shall sign and seal the document.

(5) A copy of the document shall be kept at the project while the safety net is in service.

26.9 (1) This section applies to a lanyard or lifeline that is part of a travel restraint system or a fall arrest system.

(2) The following requirements apply to a lanyard or a lifeline

1. It shall not be used in such a way that it is likely to be cut, chafed or abraded.

2. It shall not be subjected to extreme temperature, flame, abrasive or corrosive materials or other hazards that may damage it..

3. The free end of the lanyard or lifeline shall be kept clear of equipment and machinery.

(3) Only one person at a time may use a lanyard.

(4) The connecting ends of a lanyard shall be wrapped around a protective thimble and securely fastened with a swaged fitting or eye splice supplied by the manufacturer of the lanyard.

(4) A horizontal or vertical lifeline shall be kept free from splices or knots, except knots used to connect it to a fixed support.

(6) Only one person at a time may use a vertical lifeline.

(7) A vertical lifeline shall,

(a) extend to the ground; or

(b) have a positive stop that prevents the rope grab or other similar device from running off the end of the lifeline.

(8) The following requirements apply to a horizontal lifeline system:

1. It shall be designed by a professional engineer in accordance with good engineering practice.

2. The design may be a standard or a custom design.

	3. The design shall, i. show the arrangement of the system including the anchorage or fixed support system, ii. indicate the components used, iii. state the number of workers that can safely be attached to it, iv. set out instructions for installation or erection, and v. show the design loads for the system. - 4. The system shall be installed or erected, and maintained, in accordance with the professional engineer's design. 5. Before each use, the system shall be inspected by a professional engineer or a competent worker designated by a supervisor. 6. The constructor shall keep the design at the project while the system is in use. 26.10 (1) Subject to subsection (2), a worker.who is performing work on a utility pole shall do so from an elevating work platform that meets the requirements of sections 143 and 144. (2) If it is not practical for the worker to use an elevating work platform as described in subsection (1), the worker shall use a fall restricting system instead. 26.11 Until January 1,2001 sections 26 to 26.10 do not apply to a worker while he or she is engaged in erecting or dismantling scaffolding, built-in-place formwork or built-in-place falsework.
29.	**29.** (1) In this section, "facilities" means toilet, urinal and clean-up facilities; "non-sewered flush toilet facilities" means water flush toilets or chemical flush toilets that have the features listed in subsection (2); "service", when used as a verb, means to have waste pumped out and to have the facilities replenished where necessary;

	"sewered toilet facilities" means water flush toilets that are connected to a sanitary sewer system and equipped with a trap in accordance with Part 7 of the *Building Code*. (2) The features referred to in the definition of "non-sewered flush toilet facilities" are: **1.** The toilets are not connected to a sanitary sewer system, 2. They are equipped with a trap or a positive seal separating stored waste from the bowl, 3. The waste is flushed from the bowl with water containing chemical additives, deposited into a container and chemically treated sufficiently for the container's maximum capacity. (3) The constructor shall ensure, (a) that facilities are provided or arranged for workers before work has started at a project; and (b) that workers at the project have reasonable access to these facilities.
(1) The constructor shall provide or arrange for the use of toilet and clean up facilities before work has started on a project. (2) Workers at a project shall have reasonable access to the facilities required by subsection (1).	(4) Subject to subsections (5) and *(6)*, the facilities shall be located within 180 metres horizontally of the work area of the project. (5) If work is being performed in a tunnel, the facilities shall be located within 180 metres horizontally from the entrance to the tunnel. (6) The facilities may be located within 3 kilometres of the work area if transportation to the facilities is provided for workers where reasonably required. *(7)* If the project is the construction of a building, then in addition to the requirement of subsection (4), the facilities must also be located within 9 metres vertically of the level at which work is being performed. (8) The location of the facilities under subsection (7) may be varied if the arrangement affords reasonable accessibility for workers. (9) If the location of the facilities is varied under subsection (8), the constructor shall document in writing the location and the reasons for the variance, and shall provide the document to, (a) the joint health and safety committee or the health and safety representative, if any, for the workplace; or (b) the workers, if there is no committee or representative for the workers.

(10) The constructor shall,

(a) inform workers of the location of the facilities; and

(b) post the location of the facilities in a conspicuous place at the project if it is practical to do so.

(11) The facilities shall be serviced, cleaned and sanitized as frequently as necessary to maintain them in a clean and sanitary condition.

(12) The constructor shall keep at the project for the duration of the project,

(a) a record of the servicing, cleaning and sanitizing of the facilities; and

(b) a copy of the document required under subsection (9), if any.

(13) Facilities that are not under the constructor's control satisfy the requirements of this section only if the constructor has received permission from the facilities' owner for workers to use the facilities.

29.1 (1) Each toilet facility shall meet the following requirements:

1. There shall be a toilet with an open-front toilet seat. For a chemical flush toilet, a toilet cover is also required.

2. There shall be a toilet paper holder and an adequate supply of toilet paper. If the facility is intended for use by female workers, there shall be a disposal receptacle for sanitary napkins.

3. The facility shall afford the user privacy and protection from weather and from falling objects. There shall be a self-closing door that can be locked form inside the facility.

4. The facility shall be,
   i. iIluminated by natural or artificial light,
   ii. adeqautely heated, and
   iii. adequately ventilated.

5. If the facility is intended for use by males only or by females only, it shall have a sign indicating that fact.

6. The facility shall be kept in good repair at all times.

(2) Separate toilet facilities shall be provided for male and female workers, unless the facilities are intended to be used by only one worker at a time.

(3) For each group of fifteen or fewer workers, the toilet facilities shall consist of at least one flush toilet.

(4) If it is not practicable to provide the toilet facilities set out in subsection (3), the constructor shall arrange for comparable toilet facilities.

(5) For each group of fifteen or fewer workers, the clean up facilities shall consist of at least,

(a) hot running water, wash basin, soap or hand cleaner and paper towels;

(b) if the facilities under clause (a) are not practicable, cold running water, wash basin, soap or hand cleaner and paper towels; or

(c) if the facilities under clause (a) or (b) are not practicable, hand cleaner and paper towels.

(6) The toilet facilities shall afford the user privacy and protection from the weather and from falling objects.

(3) Sewered toilet facilities or non-sewered flush toilet facilities shall be provided at a project, subject to subsection (4).

(4) If a project is being carried on in a remote unpopulated area and it is not reasonably possible to provide the facilities required under subsection (3), re-circulating chemical flush toilets or other types of toilets that comply with applicable municipal by-laws may be provided instead.

(5) When toilets are provided as described in subsection (3), the minimum number of toilets required at the project is as follows:

Table 1

Minimum number of toilets	Number of workers regularly Employed at the project
1	1-15
2	16-30
3	31-45
4	46-60
4, plus 1 additional toilet for each group of 15 or fewer workers	61 or more

(6) If the toilets are located in a multiple water flush toilet facility and are intended to be used by male workers, water flush urinals may be substituted for a maximum of two-thirds of the number of toilets required by subsection (5).

(7) When toilets are provided as described in subsection (4), the minimum number of toilets required at the project is as follows:

(7) The toilet facilities,

(a) shall be equipped with a toilet that has a toilet seat and cover;

(b) shall be equipped with a urinal trough in addition to the toilet, if the toilet facilities are portable or temporary;

(c) shall be provided with toilet paper and disinfectant;

(d) shall be illuminated by natural or artificial light;

(e) shall be serviced to maintain them in a clean and sanitary condition;

(f) shall be equipped with a locking door system;

(g) shall be ventilated; and

(h) where practicable, shall be heated.

Table 2

Minimum number of toilets	Number of workers regularly Employed at the project
1	1-10
2	11-20
3	21-30
4	31-40
4, plus 1 additional toilet for each group of 15 or fewer workers	41 or more

(8) If the toilets are located in a portable single-unit toilet facility intended for use by male workers, there shall be at least one urinal for each toilet.

(9) Portable urinals equipped with clean-up facilities are permitted in addition to the requirements of this section.

29.2 (1) One clean-up facility shall be provided for every two toilet facilities required under section 29.1 and, in any case, at least one clean-up facility shall be provided at a project.

(2) Each clean-up facility shall meet the following requirements:

1. Subject to subsection (3), the facility shall have a wash basin with running water. Both hot and cold running water shall be available if reasonably possible.

2. Soap or hand cleanser shall be provided.

3. Paper towels or a hand dryer shall be provided. If paper towels are provided, there shall be a waste disposal receptacle nearby.

(3) If it is not reasonably possible to have a wash basin with running water at a cleanup facility, hand cleanser that can be used without water shall be provided instead.

52. (1) Fire extinguishing equipment shall be provided at readily accessible and adequately marked locations at a project.	**52.** NO CHANGE. (1.1) Every worker who may be required to use fire extinguishing shall be trained in its use.
56. No work shall be carried out in a building designed to be eighty-four or more metres high unless it has temporary or permanent fire pumps that provide a minimum water flow of 1,850 litres per minute at a discharge pressure of at least 450 kilopascals at and above the eighty-four metre level.	**56.** No work shall be carried out at a height of 84 metres or more in a building unless the building has temporary or permanent fire pumps that provide a minimum water flow of 1,890 litres per minute at a discharge pressure of at least 450 kilopascals at and above the 84-metre height.
57. (1) No work shall be carried out in a building with two or more storeys unless it has a permanent standpipe installed to within two storeys of the uppermost work level as the construction of the building proceeds. (2) Subsection (1) does not apply to work carried out in a building which is not required by the Building Code to have a permanent standpipe. (3) A permanent standpipe, (a) shall have sufficient hose outlets to permit every part of the building to be protected by a hose not longer than twenty-three metres; (b) shall have a connection for the use of the local fire department located on the street side of the building not more than 900 millimetres and not less than 300 milimetres above ground level and to which there is clear access at all times; and (c) shall be maintained so as to be readily operable if required to be used. (4) Every hose outlet in a permanent standpipe shall have a valve. (5) Every hose used with a permanent standpipe, (a) shall be accused thirty-eight millemetres indiameter; (b) shall have a combination straight stream and fog nozzle; and (c) shall be stored on a rack in such a way as to protect it from damage and keep it available for immediate use. O.Reg.213/91, s.57	**57.** (1) As construction proceeds in a building with two or more storeys, a permanent or temporary standpipe shall be installed to within two stories of the uppermost work level. NO CHANGE NO CHANGE NO CHANGE NO CHANGE

	(6) If a temporary standpipe has been installed, it shall not be disconnected until the permanent standpipe is connected, so that there is always a standpipe in service. (7) A temporary standpipe shall be maintained so that it is readily operable. (8) A temporary standpipe shall have at least one hose outlet per floor, with a valve and a hose attached to each hose outlet and a nozzle attached to each hose. (9) In addition to the requirements of subsection (8), there shall be a connection to which there is clear access at all times, located between 30 and 90 centimetres above ground level on a side of the building that faces the street. (10) A hose outlet on a temporary standpipe, (a) shall have a valve; and (b) shall be capable of accepting a hose that is 38 millimetres in diameter. (11) If a temporary standpipe is installed in a building under construction, the constructor shall post at the project, or have available for review, a floor plan of the building indicating, (a) the location of the hose outlets on each floor; (b) the location of the point on the perimeter of each floor that is furthest from the hose outlet on that floor; and (c) the location of each exit on each floor. (12) The constructor shall give a copy of the floor plan to the fire department located nearest to the project.
59. (1) When rock is being drilled, dissemination of dust shall be prevented by the use of dust collecting equipment or water. (2) If it is not practicable to provide dust collecting equipment or water sufficient to prevent the dissemination of dust during rock drilling, adequate respiratory protective equipment shall be provided to and used by all workers in the immediate vicinity of the drilling. O.Reg. 213/91, s. 59	**59.** If the dissemination of dust is a hazard to a worker, the dust shall be adequately controlled or each worker who may be exposed to the hazard shall be provided with adequate personal protective equipment. REVOKED

66. Machinery, equipment and material that is being used, left or stored where it may be a hazard to traffic on a public way shall be marked by flashing amber devices	**66.** Machinery, equipment and material that is being used, left or stored where it may be a hazard to traffic on a public way shall be marked by flashing devices.
67. (1) A worker who may be endangered by vehicular traffic shall be protected as far as is practicable by, (a) workers using signs to direct traffic; (b) warning signs; (c) barriers; (d) lane control devices; and (e) flashing lights or flares. (2) A worker who may be endangered by vehicular traffic while working on a public way shall wear a vest that is reflective fluorescent and coloured blaze orange or red.	**67.** (1) In this section, "barricade" means a device that provides a visual indicator of the path a motorist is supposed to take; "barrier" means a device that provides a physical limitation through which a vehicle would not normally pass, and includes a concrete barrier; "mobile operation" means work, including a paving operation, that is done on a highway or the shoulder of a highway and moves along at speeds of less than 30 kilometres per hour. (2) If a worker at a project on a highway may be endangered by vehicular traffic unrelated to the project, the project shall make use of as many of the following measures as is necessary to adequately protect the worker: 1. Barriers. 2. Barricades. 3. Delineators. 4. Lane control devices. 5. Warning signs. 6. Flashing lights. 7. Flares. 8. Traffic control devices. 9. Blocker trucks. 10. Crash trucks. 11. Sign trucks. 12. Speed control devices. 13. Longitudinal buffer areas. (3) In addition to the measures listed in subsection (2) but subject to section 68, a worker may be used to direct traffic. (4) Every employer shall develop in writing and implement a traffic protection plan for the employers' workers at the project, if any of them may be exposed to a hazard from vehicular traffic.

(5) The traffic protection plan,

(a) shall specify the vehicular traffic hazards and the measures described in subsection (2) to be used to protect workers; and

(b) shall be kept at the project and made available to an inspector or a worker on request.

(6) A worker who is required to set up or remove measures described in subsection (2) on a roadway or a shoulder of a roadway,

(a) shall be a competent worker;

(b) shall not perform any other work while setting up removing the measures; and

(c) shall be given adequate written and oral instructions, in a language that he or she understands, with respect to setting up or removing the measures.

(7) Subject to subsection (8), adequate barriers shall be installed to protect workers at a project from vehicular traffic if the project,

(a) is on a freeway;

(b) is not a mobile operation; and

(c) is expected to require more than five days to complete.

(8) Until January 1, 2003, if a project to which subsection (7) would otherwise apply is expected to require five days or less to complete, or it is not practical to install barriers as that subsection requires, the following measures shall be taken to protect workers at the project:

1. An adequate longitudinal buffer area shall be provided if physically possible.

2. If information about the annual average daily travel rate of vehicular traffic on the freeway is available and the rate is less than 25,000, blocker trucks shall be adequately positioned between vehicular traffic and workers.

3. If the annual average daily rate of vehicular traffic on the freeway is 25,000 or more or if information about the rate is unavailable, crash trucks shall be adequately positioned between vehicular traffic and workers.

	(9) If subsection (8) applies and information about the annual average daily travel rate of vehicular traffic on the freeway is available, a record of the rate shall be maintained at the project and be made available to an inspector upon request. (10) On and after January 1, 2003, if it is not practical to install barriers as subsection (7) requires, or if the project is expected to require five days or less to complete, crash trucks shall be adequately positioned to protect workers. (11) If work on a shoulder of a freeway is expected to take less than 30 minutes to complete, a vehicle with four-way flashers and a 360-degree beacon light shall be provided. (12) The following measures shall be taken to protect a worker at a project if the project is on a freeway and involves a mobile operation: 1. Until January 1, 2003, an adequate number of blocker trucks shall be adequately positioned between vehicular traffic and the worker. 2. On or after January 1, 2003, an adequate number of crash trucks shall be adequately positioned between vehicular traffic and the worker. 3. If the operation involves intermittent stops averaging 30 minutes or less, an adequate number of barricades or delineators shall be adequately positioned between vehicular traffic and the worker. 4. If the operation involves intermittent stops averaging more than 30 minutes, i. an adequate longitudinal buffer area shall be provided if physically possible, ii. the lane on which work is being done shall be adequately identified with lane closure signs and a lane closure taper, and iii. an adequate number of barricades or delineators shall be adequately positioned between vehicular traffic and the work area.
68. A sign used to direct traffic, *(a)* shall be diamond-shaped, 450 millimetres wide and 450 millimetres long, with the diamond mounted at one corner on a pole 1.2 metres long;	**68.** The following requirements apply with respect to a sign used by a worker to direct vehicular traffic: 1. It shall be octagonal in shape, measure 450 millimetres between opposite sides, and be mounted on a pole that is 1.2 metres long.

(b) shall be made of material that has at least the rigidity of six millimetres thick plywood; *(c)* shall be reflective fluorescent and coloured, (i) red-orange on one side with the corner areas coloured black, so that the red-orange area forms a regular eight-sided figure, with the word "STOP" written in legible white letters 150 millimetres high in a central position on the sign, and (ii) chartreuse on one side, with the word "SLOW" written in legible black letters 150 millimetres high in a central position on the sign; and *(d)* shall be maintained in a clean condition. **NOTE:** *See "Traffic Control Manual for Roadway Work Operations", available through the Ministry of Transportation, Downsview, Ontario.*	2. It shall be made of material with at least the rigidity of plywood that is six-millimetre-thick. 3. On one side it shall be high-intensity retro-reflective grade red in colour, with the word “STOP” written in legible high-intensity retro-reflective grade white letters 150 millimetres high in a central position on the sign. 4. On the other side it shall be high retro-reflective micro-prismatic fluorescent chartreuse in colour, with a black diamond-shaped border that is at least 317 millimetres by 317 millimetres, and with the word “SLOW” written in legible black letters 120 millimetres high in a central position on the sign. 5. It shall be maintained in a clean and legible condition.
69. (1) A worker who is required to direct traffic, (a) shall be a competent worker; (b) shall not perform other work while directing traffic; (c) shall be given written instructions in a language the worker can read and understand setting out the signals the worker is to use; and (d) shall have the instructions explained to him or her orally.	**69.** (1) This section applies with respect to directing vehicular traffic that may be a hazard to workers on a public way. (2) A worker shall not direct vehicular traffic for more than one lane in the same direction. (3) A worker shall not direct vehicular traffic if the normal posted speed limit of the public way is more than 90 kilometres per hour. (4) A worker who is required to direct vehicular traffic, (a) shall be a competent worker; (b) shall not perform any other work while directing vehicular traffic; (c) shall be positioned in such a way that he or she is endangered as little as possible by vehicular traffic; and (e) shall be given adequate written and oral instructions, in a language that he or she understands, with respect to directing vehicular traffic, and those instructions shall include a description of the signals that are to be used.

(2) A worker who is directing traffic shall wear a vest that is reflective fluorescent and coloured blaze orange or red.	(5) The written instructions referred to in clause (4)(d) shall be kept at the project. 69.1 (1) A worker who may be endangered by vehicular traffic shall wear a garment that covers at least his or her upper body and has the following features: 1. The garment shall be fluorescent blaze or international orange in colour. 2. On the front and the back, there shall be two yellow stripes that are 5 centimetres wide. The yellow area shall total at least 500 square centimetres on the front and at least 570 square centimetres on the back. 3. On the front, the stripes shall be arranged vertically and centred and shall be approximately 225 millimetres apart, measured from the centre of each stripe. On the back they shall be arranged in a diagonal "X" pattern. 4. The stripes shall be retro-reflective and fluorescent. (2) If the garment is a vest, it shall have adjustable fit. (3) On and after January 1, 2001, a nylon vest to which this section applies shall also have a side and front tear-away feature. (4) In addition, a worker who may be endangered by vehicular traffic during night-time hours shall wear retro-reflective silver stripes encircling each arm and leg, or equivalent side visibility-enhancing stripes with a minimum area of 50 square centimetres per side.
85. (1) A guardrail shall consist of a top rail, intermediate rail and toe-board and shall be capable of resisting any load that may be applied to it. (2) The top of a guardrail shall be located not less than 0.9 metres and not more than 1.1 metres above the surface on which the guardrail is installed. (3) A wooden guardrail shall be free of splinters and protruding nails and shall have, (a) a top-rail that measures not less than thirty-eight millimetres by eighty-nine millimetres securely supported on posts that measure not less than thirty-eight millimetres by eighty-nine millimetres and that are spaced at intervals of not more than 2.4 metres;	**85.** REVOKED

(b) an intermediate rail of not less than nineteen millimetres by eighty-nine millimetres that is securely fastened to the inner side of the posts referred to in clause (a) midway between the top rail and the toe-board; and

(a) a toe-board that is securely fastened to the posts referred to in clause (a) or to other vertical supports and that extends from the surface to which the guardrail is attached to a height of not less than 100 millimetres.

(4) A wire cable guardrail shall be maintained taut by means of a turn-buckle and shall have,

(a) a top rail and an intermediate rail made of wire cable that is not less than ten millimetres in diameter;

(b) vertical separators not less than fifty millimetres wide that are spaced at intervals not exceeding 2.4 metres; and

(c) a toe-board that is securely fastened to the inner side of the vertical separators referred to in clause (b) and that extends from the surface to which the guardrail is attached to a height of not less than 100 millimetres.

(5) A wood-slat guardrail shall be maintained taut and be adequately supported in a vertical position, and shall have vertical slats,

(a) that are 1.2 metres long, at least thirty-eight millimetres wide and 9.5 millimetres thick;

(b) that are woven among five double strands of 16 Ga steel wire 250 millimetres apart in such a way that the slats are tight;

(c) that are spaced at not more than ninety millimetres from the centre of one slat to the centre of the next slat; and

(d) that are painted a distinctive colour.

The double strands of 16 Ga steel wire shall be wrapped around each other at least three times in each space between slats.

86. (1) A guardrail shall be provided around an opening in a floor, roof or surface to which a worker has access. (2) No guardrail is required around an opening in a floor, roof or surface to which a worker has access if the opening is covered with securely fastened planks that, without exceeding the allowable unit stresses for the materials used, (a) are capable of supporting or are braced to support all loads to which they may be subjected; and (b) are capable of supporting a live load of at least 2.4 kilonewtons per square metre. (3) Subject to subsection (4), a guardrail shall be provided at the perimeter, open sides and ends of, (a) a floor including the floor of a mezzanine or balcony; (b) the surface of a bridge; (c) a concrete roof while the formwork remains in place; and (d) a scaffold platform, work platform, runway or ramp. (4) A guardrail is required if the place described in subsection (3) is one to which a worker has access and, (a) from which the worker may fall into water or other liquid or into or onto any hazardous substance or object; or (b) from which the worker may fall a vertical distance of 2.4 metres or more. (5) A guardrail shall be provided at the open sides and ends of a scaffold platform, work platform, runway or ramp that is used as a path for a wheelbarrow or similar equipment and from which a worker may fall a distance of 1.2 metres or more.	**86.** REVOKED

(6) A guardrail or covering may be removed temporarily for the purpose of doing work, (a) if the work cannot be done with the guardrail or covering in place; (b) if the workers doing the work are protected as prescribed by sections 26 and 27; and (c) if hazard signs required by section 44 are posted where workers, other than the workers doing the work, have access to the area.	
93. (1) All vehicles, machinery, tools and equipment shall be maintained in a condition that does not endanger a worker. (2) No vehicle, machine, tool or equipment shall be used, *(a)* while it is defective or hazardous; *(b)* when the weather or other conditions are such that its use is likely to endanger a worker; or *(c)* while it is being repaired or serviced. (3) A copy of the manufacturer's operating manual for a vehicle, machine, tool or for equipment used at a project shall be kept readily available at the project.	**93.** NO CHANGE (2) No vehicle, machine, tool or equipment shall be used, *(a)* while it is defective or hazardous; *(b)* when the weather or other conditions are such that its use is likely to endanger a worker; or *(c)* while it is being repaired or serviced, unless the repair or servicing requires that it be operated. (3) All vehicles, machines, tools and equipment shall be used in accordance with any operating manuals issued by the manufacturers. (4) For vehicles, machines, tools and equipment rated at greater than 10 horsepower, copies of any operating manuals issued by the manufacturers shall be kept readily available at the project.
94. (1) Every mechanically-powered vehicle, machine, tool and equipment shall be inspected by a competent worker, (a) for defects or hazardous conditions; and (b) to determine whether it can handle its rated capacity.	**94.** 94. (1) All mechanically-powered vehicles, machines, tools and equipment rated at greater than 10 horsepower shall be inspected by a competent worker to determine whether they can handle their rated capacity and to identify any defects or hazardous conditions.

	(2) The inspections shall be performed before the vehicles, machines, tools or equipment are first used at the project and thereafter at least once a year or more frequently as recommended by the manufacturer.
96. (1) No worker shall operate a vehicle at a project unless the worker, (a) is qualified to operate the vehicle; or (b) has a licence to operate a vehicle on a highway. 2) A worker who is not qualified or licensed may operate a vehicle on a project if the worker is being instructed in the operation of the vehicle and is accompanied by a person who is qualified to operate the vehicle.	**96.** (1) No worker shall operate a vehicle at a project unless he or she is competent to do so. (2) However, a worker being trained in the operation of a vehicle may operate it while being instructed and supervised by a competent person.
104. No vehicle, machine or equipment, or crane or similar hoisting device, or shovel, backhoe or similar excavating machine shall be operated unless the operator is assisted by a signaller, (a) where the operator's view of the intended path of travel of any part of it or its load is obstructed; or (b) where it is in a location in which a person may be endangered by any part of it or its load.	**104.** (1) Every project shall be planned and organized so that vehicles and equipment are not operated in reverse or are operated in reverse as little as possible. (2) Vehicles, machines and equipment at a project shall not be operated in reverse unless there is no practical alternative to doing so. (3) Operators of vehicles, machines and equipment shall be assisted by signallers if either of the following applies: 1. The operator's view of the intended path of travel is obstructed. 2. A person could be endangered by the vehicle, machine or equipment or by its load. (4) Subsection (3) also applies to shovels, backhoes and similar excavating machines and to cranes and similar hoisting devices. (5) The operator and the signaller shall, (a) jointly establish the procedures by which the signaller assists the operator; and (b) follow those procedures.

	(6) If subsection (3) applies to the project and it is not possible to carry out the project without some operation of vehicles and equipment in reverse, signs shall be posted at the project in conspicuous places warning workers of the danger.
105. An operator of a vehicle, machine or equipment, or crane or similar hoisting device, or shovel, backhoe or similar excavating machine who is required to be assisted by a signaller shall operate it as directed by the signaller.	**105.** A dump truck shall be equipped with an automatic audible alarm that signals when the truck is being operated in reverse.
106. (1) A signaller shall be a competent worker and shall not perform other work while acting as a signaller. (2) A signaller, *(a)* shall be clear of the intended path of travel of the vehicle, machine or equipment, crane or similar hoisting device, shovel, backhoe or similar excavating machine or its load; *(b)* shall be in full view of the operator of the vehicle, machine or equipment, crane or similar hoisting device, shovel, backhoe or similar excavating machine; *(c)* shall have a clear view of the intended path of travel of the vehicle, machine or equipment, crane or similar hoisting device, shovel, backhoe or similar excavating machine or its load; and *(d)* shall watch the part of the vehicle, machine or equipment or crane or similar hoisting device, shovel, backhoe or similar excavating machine or its load whose path of travel the operator cannot see. (3) The signaller shall communicate with the operator by means of a telecommunication system or, where visual signals are clearly visible to the operator, by means of prearranged visual signals.	**106.** NO CHANGE. NO CHANGE NO CHANGE (1.1) The signaller shall wear a garment that covers at least his or her upper body and has the following features: 1. The garment shall be flourescent blaze or international orange in colour.

	2. On the front and the back, there shall be two yellow stripes that are 5 centimetres wide. The yellow area shall total at least 500 square centimetres on the front and at least 570 square centimetres on the back. 3. On the front, the stripes shall be arranged vertically and centred and shall be approximately 225 millimetres apart, measured from the centre of each stripe. On the back they shall be arranged in a diagonal "X" pattern. 4. The stripes shall be retro-reflective and fluorescent. (1.2) If the garment is a vest, it shall have adjustable fit. (1.3) On and after January 1, 2001, a nylon vest to which this section applies shall also have a side and front tear-away feature. (1.4) In addition, a signaller who may be endangered during night-time hours shall wear retro-reflective silver stripes encircling each arm and leg, or equivalent side visibility-enhancing stripes with a minimum area of 50 square centimetres per side. (1.5) The employer shall, (a) ensure that the signaller has received adequate oral training in his or her duties and has received adequate oral and written instructions in a language that he or she understands; and (b) keep the written instructions at the project.
112. (1) Every chain-saw shall have a chain that minimizes kickback and a device to stop the chain in the event of a kickback. (2) A worker shall hold a chain-saw firmly when starting it and firmly in both hands when using it. (3) The chain of a chain-saw shall be stopped when not cutting.	**112.** NO CHANGE. NO CHANGE NO CHANGE (1.1) No worker shall use a chain-saw unless he or she has been adequately trained in its use. (1.2) No worker shall use a chain-saw unless he or she is wearing, (a) adequate personal protective equipment and clothing, including gloves; and

	(b) adequate eye protection and hearing protection.
117. No worker shall use an explosive actuated fastening tool unless the worker, (a) has been instructed in its safe and proper use by its manufacturer or the manufacturer's agent; and (b) is wearing protective headwear and using eye protection.	**117.** (1) No worker shall use an explosive actuated fastening tool unless he or she has been adequately trained in its use. (2) When using an explosive actuated fastening tool, the worker shall carry proof of his or her training in its use. (3) No worker shall use an explosive actuated fastening tool unless he or she is wearing, (a) adequate persona! protective equipment; and (b) adequate eye protection.
119. (1) No worker shall use an explosive actuated fastening tool unless it has a suitable protective guard, (a) that is at least seventy-five millimetres in diameter; (b) that is mounted at right angles to the barrel of the tool; and (c) that is centred on the muzzle end of the tool, if practicable. (2) No explosive actuated fastening tool shall be capable of being operated unless, (a) its muzzle end is held against a surface using a force at least twenty-two newtons greater than the force equivalent of the weight of the tool measured in newtons; and (b) when the protective guard is centred on the muzzle end of the tool, the bearing surface of the guard is not tilted more than eight degrees from the work surface. (3) Subsection (1) and clause (2)(b) do not apply with respect to an explosive actuated fastening tool if the velocity of a fastener fired from it does not exceed ninety metres per second measured at a distance of two metres from its muzzle end when propelled by the maximum	**119.** NO CHANGE (2) An explosive actuated fastening tool shall be inoperable unless, NO CHANGE NO CHANGE

commercially-available explosive load it is chambered to accept. (4) If an explosive actuated fastening tool is designed to require dismantling into separate parts for loading, it shall not be able to be operated unless the separate parts are locked together. (5) An explosive actuated fastening tool shall have a firing mechanism that prevents the tool from being fired if it is dropped or while it is being loaded and prepared for firing. (6) No explosive actuated fastening tool shall be able to be fired unless the operator performs the two separate actions described in subsection (7). (7) The firing movement for an explosive actuated fastening tool shall be a separate action from the operation of bringing the tool into the firing position.	(4) An explosive actuated fastening tool that is designed to require dismantling into separate parts for loading shall be inoperable unless the separate parts are locked together. NO CHANGE (6) The firing movement for an explosive actuated fastening tool shall be a separate action from the operation of bringing the tool into firing position. (7) An explosive actuated fastening tool shall not be capable of being fired until the operator performs the two separate actions described in subsection (6).
	Subsection 236(8) of the Regulation is amended by striking out “the Director of the Construction Health and Safety Branch” and substituting “a Director”. Subsection 245(1) of the Regulation is amended by striking unit “the Director of the Construction Health and Safety Branch” and substituting “a Director”. Clause 245 (2) (f) of the Regulation is amended by striking out “nearest public highway” and substituting “nearest highway”.
	Subsection 265(3) of the Regulation is amended by striking out “the Director of the Construction Health and Safety Branch” and substituting “a Director”. Subsection 265 (4) of the Regulation is revoked and the following substituted: (4) A Director who makes an appointment described in subsection (3) shall, in doing so, consider any recommendations of the representatives of labour and of management. Subsection 280 (4) of the Regulation is amended by striking out “the Director of the Construction Health and Safety Branch” and substituting “a Director”.
	Section 316 of the Regulation is amended by striking out “the Director of the Construction Health and Safety Branch” and substituting “a Director”.
	Subsection 334(2) of the Regulation is amended by striking out “the Director of the Construction Health and Safety Branch” and substituting “a Director”.

	Subsection 334 (3) of the Regulation is amended by striking out “the Director of the Construction Health and Safety Branch” and substituting “a Director”
	Clause 335 (1) (b) of the Regulation is amended by striking out “the Director of the Construction Health and Safety Branch” and substituting “a Director”.
	Subsection 338 (2) of the Regulation is amended by striking out “the Director of the Construction Health and Safety Branch” and substituting “a Director”.
	Subsection 365 (4) of the Regulation is amended by striking out “the Director of the Construction Health and Safety Branch” and substituting “a Director”.
	Subsection 397(1) of the Regulation is amended by striking out “the Director of the Construction Health and Safety Branch” and substituting “a Director”. Subsection 397 (2) of the Regulation is amended by striking out “the Director of the Construction Health and Safety Branch” and substituting “a Director”.
	Except as otherwise provided in this section, this Regulation comes into force on June 12, 2000. Section 26.2 comes into force on June 12, 2002. (training for fall protection). Section 68 comes into force on January 1, 2001 (new traffic signs).